From: PETERSON Jenn L
To: Eric Blischke/R10/USEPA/US@EPA
Subject: RE: LWG proposal to use RSET toxicity bioassay interpretation criteria
Date: 04/30/2008 10:51 AM

Eric,

Is this going to be decided today? I think there are two issues: 1)interpretive criteria and 2) the rest of the RSET framework which includes one hit / two hit decision criteria and comparison to reference. Is the LWG proposing to use the entire framework?

-Jennifer

-----Original Message-----
From: Blischke.Eric@epamail.epa.gov [mailto:Blischke.Eric@epamail.epa.gov]
Sent: Tuesday, April 29, 2008 9:11 PM
To: Robert W. Gensemer
Cc: shephard.burt@epa.gov; Goulet.Joe@epamail.epa.gov; PETERSON Jenn L
Subject: Re: LWG proposal to use RSET toxicity bioassay interpretation criteria

Bob, we do have some reference bioassays. 18 tests collected during Round 2 from the upriver portion of the site we are considering for background. We have none for Round 3B.

Other than that, I am having a hard time understanding the RESET approach from your email. Perhaps we should just rely on the train schedules.

Eric

"Robert W. Gensemer" <rgensemer@parametrix.com>		To
04/29/2008 03:41 PM	Joe Goulet/R10/USEPA/US@EPA, Burt Shephard/R10/USEPA/US@EPA, Jennifer Peterson <peterson.jennifer@deq.state.or.us>	cc
	Eric Blischke/R10/USEPA/US@EPA	Subject
	LWG proposal to use RSET toxicity bioassay interpretation criteria	

Joe et al: After reviewing both the 2006 RSET report and the proposed changes that Helle sent us last week, I am struggling to find support for LWG's proposal to use the RSET guidelines vs. those used in our problem formulation (70/80/90% control-adjused response thresholds or the "status and trends" approach). First and foremost, the RSET thresholds depend directly on use of toxicity tests from reference sediments. What "reference" sediments would LWG propose using? Do we even have any at this site besides negative controls or tests in artificial "reference" sediments? The latter are not the same as a site reference (e.g., upstream of the site), but you guys know these data better than I do.

Second, the revised guidance has nothing to do with "1-hit 2-hit" decisions, best I can tell. Instead they use "SL1 and SL2" thresholds based on set differences between test and reference sediment responses (if statistically different from controls). That makes more sense to me that the 1-hit vs. 2-hit thresholds, simply because the levels are based on a percent difference that is easy to see and communicate--if the difference between test and control sediments is relatively large (e.g., SL2), then this is a more "severe" toxicity response. Makes sense. Whereas I'm still confused which is the more conservative response: 1-hit or 2-hit? Maybe I'm just dense...I'm sure I'll eventually sort that out if I read it through a few more times, but its pretty cryptic on the first and second read. Regardless of which RSET approach they are suggesting we use, without some further information on how LWG would intend to use a "reference" sediment, its unclear to me how the SL1 or SL2 thresholds would be used in the BERA risk characterization for this line of evidence.

Part of John's arguments in favor of using the RSET approach was, I think, that variance in the empirical toxicity data could be better explained, or the tox predictive models worked better. I can't recall which it was. Anyway, although improved explanatory power is a good thing, its not the only thing--mechanism and biological reality count too. Do the "improved" toxicity predictors make sense from a biological point of view? Even if we could predict toxicity better with an Amtrak train schedule I would still not recommend using it (to provide an extreme example).

What have you heard from others, Burt and Joe? Does this approach have more merit than I can come up with so far? I'm open to considering it, but so far, I'm not convinced. -Bob

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